

MULTI-BAND ANTENNAS AND RADIO APPARATUS INCORPORATING THE SAME

ABSTRACT OF THE DISCLOSURE

An antenna for a radio communications device includes a ground plane and a conductor loop overlying the ground plane. A monopole extends off the ground plane, and the monopole and the conductor loop are coupled at a common feedpoint. In some embodiments, the conductor loop is rectangular. In further embodiments, the antenna may further include a helical element arranged coaxial with the monopole and coupled to the common feedpoint. The ground plane, the conductor loop, the monopole and the helical element may be configured to provide a desirable voltage standing wave ratio (VSWR) over a wide frequency range of frequencies used for cellular telephony, global positioning services, and ad hoc wireless networking. Radio communications devices incorporating such antennas are also described.